

CLAIMS

1. (amended) A motor drive apparatus comprising:
estimation means (89, 91) estimating an amount of demagnetization of a
5 permanent magnet motor (60) based on a voltage control amount of the q axis applied in
a case where said permanent magnet motor (60) is controlled using a d-q axis
transformation; and
operation handling means (91) limiting an output of said permanent magnet
motor (60) when said estimated amount of demagnetization is larger than a
10 predetermined value.
2. The motor drive apparatus according to claim 1, further comprising a
converter (20) changing an input voltage necessary for driving said permanent magnet
motor (6), wherein
15 said estimation means (89, 91) corrects said estimated amount of
demagnetization according to the level of said input voltage.
3. The motor drive apparatus according to claim 1, wherein
said estimation means (89, 91) estimates said amount of demagnetization by
20 comparing the voltage control amount of the q axis to be controlled with a reference
value.
4. The motor drive apparatus according to claim 3, wherein
said estimation means (89, 91) holds, in the form of a map (MAP), the reference
25 values correlated with at least two revolution numbers to extract said reference value
from said map (MAP) and estimate said amount of demagnetization.
5. The motor drive apparatus according to claim 1, wherein